



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,755	02/25/2002	Herve Benoit	PHFR 010022	8281

65913 7590 07/09/2009  
NXP, B.V.  
NXP INTELLECTUAL PROPERTY & LICENSING  
M/S41-SJ  
1109 MCKAY DRIVE  
SAN JOSE, CA 95131

EXAMINER
----------

BROWN, CHRISTOPHER J

ART UNIT	PAPER NUMBER
----------	--------------

2439

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

07/09/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* HERVE BENOIT

---

Appeal 2008-003362  
Application 10/084,755  
Technology Center 2100

---

Decided: July 7, 2009<sup>1</sup>

---

Before HOWARD B. BLANKENSHIP, ST. JOHN COURTENAY, III, and  
STEPHEN C. SIU, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION ON APPEAL

---

<sup>1</sup> The two month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

## STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-10. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

### *The Invention*

The disclosed invention relates generally to a decoding and descrambling system that receives protected information and supplies an enabling signal to enable a descrambler to descramble or decode the protected information (Spec. 2).

Independent claim 1 is illustrative:

1. A system to receive encoded and scrambled data signals and process the signals in order to convert them to output stimuli that can be understood by a user of the system, the system comprising:
  - a data signal decoder for decompressing the data signals;
  - an output device for generating the output stimuli on the basis of output signals from the decoder;
  - descrambling means for descrambling the data signals, said descrambling means being activated by an enabling signal;
  - and
  - enabling means for receiving protected information from a transmitter transmitting the data signals and supplying the enabling signal following the reception of said protective information,wherein the descrambling means execute a conditional access software program for controlling the descrambling of said data signals, said software program being transported to the descrambling means by the enabling signal.

*The References*

The Examiner relies upon the following references as evidence in support of the rejections:

Gammie	US 5,029,207	Jul. 02, 1991
Newby	US 6,115,821	Sep. 05, 2000
Della Valle	EP 1168137 A1	Jan. 02, 2002
Kasahara	US 2002/0001383 A1	Jan. 03, 2002
Candelore	US 6,912,513 B1	Jun. 28, 2005

(filed Oct. 29, 1999)

EBU Project Group B/CA, *EBU Technical Review*, (Winter 1995), pg. 71, (“EBU”).

*The Rejections*

1. The Examiner rejects claims 1, 3, 6, 9, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, and Kasahara.
2. The Examiner rejects claims 2 and 5<sup>2</sup> under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara, and Gammie.
3. The Examiner rejects claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara, and EBU.

---

<sup>2</sup> The Examiner rejects claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara, and Gammie but rejects claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, and Kasahara. Because claim 5 depends from claim 2 and incorporates each limitation recited in claim 2, we assume the Examiner rejects claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara and Gammie.

4. The Examiner rejects claims 7 and 8<sup>3</sup> under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara, and Della Valle.

#### ISSUE #1

The Examiner finds that the claimed invention would have been obvious to one of ordinary skill in the art over the combination of Newby, Candelore, and Kasahara (Ans. 3-4).

Appellant asserts that it would not have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references because “the Examiner alleges motivation to combine Newby with Candelore . . . [and] Kasahara . . . [that are] two completely separate and unsubstantiated motivations” (App. Br. 10).

Did Appellant demonstrate that the Examiner erred in finding that it would have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references?

---

<sup>3</sup> The Examiner rejects claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara, and Della Valle but rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, and Kasahara. Because claim 8 depends from claim 7 and incorporates each limitation recited in claim 7, we assume the Examiner rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Newby, Candelore, Kasahara and Della Valle.

## ISSUE #2

Appellant asserts that it would not have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references with the Gammie, EBU or Della Valle reference because the Examiner provides “completely separate and unsubstantiated motivations for combining selected disclosure in four different references” (*see, e.g., App. Br. 19*).

Did Appellant demonstrate that the Examiner erred in finding that it would have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references with the Gammie, EBU, or Della Valle reference?

## FINDINGS OF FACT

The following Findings of Facts (FF) are shown by a preponderance of the evidence.

1. Newby discloses “a conditional access system” (col. 3, ll. 5-6) including an encryptor that “encrypts the clear information segments” (col. 3, l. 40) and a decryptor that “decrypts the received encrypted information segments” (col. 4, ll. 39-40) using “a session key K” (col. 3, ll. 41-42).
2. Candelore discloses a system that provides “copy protection for a content” (col. 2, ll. 43-44) that includes a descrambler that

“descrambles the scrambled content using a local key” (col. 2, ll. 45-46) in order to “prevent unauthorized copying of clear content” (col. 1, l. 13). Candelore also discloses that the local key is generated “from a programmable user key according to an authorization code provided by the content provider” (Abstract).

3. Kasahara discloses encrypting data using “[c]ryptosystems [that use] polynomials in multivariables” (§[0002]) and adds “to the above multivariable polynomial cryptosystem, the combination with noise and the subsequent scrambling” (§[0010]) such that “the security is remarkably enhanced” (*id.*).
4. Gammie discloses a “conditional-access system for satellite transmission” (col. 2, ll. 29-30) and “protecting the key during distribution” (col. 2, ll. 53-54) in which “[t]he source program [is] scrambled with the key, and the key itself has been encrypted using a secret serial number” (col. 2, ll. 63-65).
5. ECU discloses a data security system that “must be effective in preventing piracy” (pg. 71, col. 2) and “integrated into [a] television set [and accesses] any combination of programme services to which individual viewers had subscribed” (pg. 71, cols. 1-2).
6. Della Valle discloses a “smart card reader” (§[0017]) and that data “installed on the personal computer can be stored on the smart card” (§[0023]).

## PRINCIPLES OF LAW

### *Obviousness*

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007).

## ANALYSIS

### *Issue #1*

As Appellant’s arguments with regard to issue #1 apply to claims 1-10, we will decide the appeal of claim 1-10 on the basis of claim 1 alone with respect to issue #1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

As set forth above, Newby discloses a method and system for controlling user access to data in which the data is encrypted and decrypted using a session key (FF 1), Candelore discloses a method and system for controlling user access to data (i.e., copy protection of data) in which the data is scrambled and descrambled using a local key (FF 2) that is generated from a programmable user key based on a code from the content provider,



and Kasahara discloses encrypting data using polynomials in multivariables such that “security is remarkably enhanced” (FF 3).

We agree with the Examiner that it would have been obvious to combine the teachings of the Newby, Candelore and Kasahara references because each reference discloses elements of data security and conditional access that would have been known to one of ordinary skill in the art, the combination of which would have required no more than the mere rearrangement of the known elements to achieve a predictable result of controlled data access via data encryption (or scrambling) and decryption (or descrambling) using a key. “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417 (citing *Sakraid v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976)).

Appellant argues that “the Examiner improperly relies on ‘subjective belief and unknown authority’ to establish the motivation to combine references” (App. Br. 10) “because the Examiner has provided no citation within the references themselves” (*id.*) and that “the prior art contains no such ‘clear and particular’ expression of the desirability of combining the particular teachings” (*id.* 11). Even assuming Appellant’s contention to be true that the Examiner has not indicated specific citations within the cited references themselves describing a motivation for combining the cited references, we nevertheless find Appellant’s argument unpersuasive because

the cited references themselves need not explicitly state a specific motivation for combining references. “Often, it will be necessary for a court to look to interrelated teachings of multiple patents . . . and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reasons to combine the known elements” *KSR*, 550 U.S. at 418.

In the present case, the Examiner has made an explicit analysis detailing obviousness of the combination of references that takes into account the inferences and creative steps a person of ordinary skill in the art would have employed. We find that the Examiner’s rationale to combine the teachings of these references is supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion. *KSR*, 550 U.S. at 418 (“To facilitate review, this analysis should be made explicit”). Since the reason to combine references need not be limited to the four corners of the cited references, but rather can be ascertained from any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself (*DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006) (citing *In re Dembiczak*, 175 F.3d 994, 999 (Fed.Cir.1999))) and since Appellant provides no arguments demonstrating error in the Examiner’s analysis other than the references themselves allegedly not containing an explicitly stated motivation, we are unpersuaded by Appellant’s argument.

Appellant also argues that “the Examiner relies on impermissible hindsight in reaching a determination of obviousness” (App. Br. 11) because “only by the impermissible use of hindsight knowledge of Applicant’s own disclosure would the Examiner have acquired a motivation to combine the teachings of the cited references” (*id.* 13). We disagree. While “[a] factfinder should be aware . . . of the distortion caused by hindsight bias . . . [r]igid preventative rules that deny factfinders recourse to common sense . . . are neither necessary under our case law nor consistent with it” *KSR*, 550 U.S. at 421.

In the present case, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art to have combined a method or system for controlling user access to data by encrypting/scrambling data and decrypting/descrambling data with a key (Newbie and/or Candelore) and further enhancing data security by encrypting the data with polynomials in multivariables (Kasahara). As set forth above, such a combination would have entailed the mere rearrangement of a known system/method for controlling data access by data encryption with a key and further ensuring that encrypting included polynomials in multivariables to achieve the expected result of secure data encryption and decryption. Nor has Appellant demonstrated that effecting such a combination was “uniquely challenging or difficult for one of ordinary skill in the art.” *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

For at least the aforementioned reasons, we conclude that Appellant has not sustained the requisite burden on appeal in providing arguments or evidence persuasive of error in the Examiner's rejection of claim 1, or of claims 2-9, which fall therewith with respect to issue #1.

#### ANALYSIS (ISSUE #2)

As set forth above, the combination of Newbie, Candelore, and Kasahara discloses a conditional access system that controls access to data by encrypting and decrypting data with a key. Gammie also discloses a conditional access system utilizing a key and further encrypts the key with a secret serial number (FF 4).

Regarding claims 2 and 5, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art to have combined the Gammie reference with the combination of Newbie, Candelore, and Kasahara because doing so would have entailed no more than combining a known component of encrypting and decrypting secure data with a key with another known component of encrypting the key itself with a serial number to achieve an expected result of enhancing data security. *KSR*, 550 U.S. at 417.

Similarly, regarding claim 4, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art to have combined the EBU reference with the combination of Newbie, Candelore, and Kasahara because doing so would have entailed no more than combining a

known component of encrypting and decrypting secure data with a key (including descrambling data to prevent unauthorized copying or piracy – Candelore, FF 2) with another known component of utilizing a data security system in “preventing piracy” (FF 5 - ECU) to achieve an expected result of enhancing data security to prevent unauthorized copying of data.

We also agree with the Examiner, with regard to claims 7 and 8, that it would have been obvious to one of ordinary skill in the art to have combined the Della Valle reference with the combination of Newbie, Candelore, and Kasahara because doing so would have entailed no more than combining a known component of encrypting and decrypting secure data with a key with another known component of storing protected information in a memory to achieve an expected result of enhancing data security. We disagree with Appellant’s implication that merely storing protected information in memory in Newbie, Candelore, and/or Kasahara, would have been “uniquely challenging or difficult” for one of ordinary skill in the art to have accomplished.

We also do not find, and Appellant has not demonstrated, that any more than common sense would have been required on the part of the skilled artisan to encrypt a key for added security (Gammie), to prevent piracy or unauthorized copying of data (EBU), or to store information in memory (Della Valle) in a conditional data access system known to utilize a key to encrypt and decrypt data to prevent unauthorized data access (Newbie, Candelore, and Kasahara). “It is common sense that familiar items may

have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *KSR* 550 U.S. at 402.

Appellant argues that “the Examiner has provided no citation within the references themselves” (App. Br. 19) and that the “Examiner relies on impermissible hindsight” (App. Br. 21). We are unpersuaded by Appellant’s arguments for reasons set forth above.

For at least the aforementioned reasons, we conclude that Appellants have not sustained the requisite burden on appeal in providing arguments or evidence persuasive of error in the Examiner’s rejection of claims 2, 4, 5, 7, or 8 with respect to issue #2.

### CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that Appellants have failed to demonstrate that the Examiner erred in:

1. finding that it would have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references (issue #1) and
2. finding that it would have been obvious to one of ordinary skill in the art to have combined the Newby, Candelore, and Kasahara references with the Gammie, EBU, or Della Valle reference (issue #2).

Appeal 2008-003362  
Application 10/084,755

DECISION

We affirm the Examiner's decision rejecting claims 1-10 under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

PEB

NXP, B.V.  
NXP INTELLECTUAL PROPERTY DEPARTMENT  
M/S41-SJ  
1109 MCKAY DRIVE  
SAN JOSE, CA 95131